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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/001,953	10/25/2001	Toshikazu Kobayashi	100809-00051 (SCET 19.104	8865

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KATTEN MUCHIN ROSENMAN LLP
575 MADISON AVENUE
NEW YORK, NY 10022-2585

EXAMINER	
PATEL, GAUTAM	
ART UNIT	PAPER NUMBER
2655	

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/001,953	KOBAYASHI, TOSHIKAZU	
	Examiner	Art Unit	
	Gautam R. Patel	2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 4-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1-18-05;1-18-05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-2 and 4-6 are pending for the examination.

RCE STATUS

2. The request filed on 4-21-05 for Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application is acceptable and a RCE has been established. An action on the RCE follows.

Claim Rejections - 35 U.S.C. § 103

3. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2, and 4-5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ichimura et al., US. patent 6,097,688 (hereafter Ichimura) in view of Nagata et al., US. patent 5,481,526 (hereafter Nagata).

As to claim 1, Ichimura discloses the invention as claimed [see Figs. 1-9, especially 1-4 and 9] including focus drive means, photodetection means, focus-error-signal generation means, recorded-layer movement control means, focus pull-in means and intermediate value, comprising:

focus drive means [fig. 1, unit 6 and 7] for moving the objective lens in a direction orthogonal to the recorded layers of the optical disk [col. 3, line 51 to col. 4, line 12];

photodetection means [fig. 3, unit 74 and 77] for detecting reflected light from said optical disk [col. 6, lines 9-38];

focus-error-signal generation means [fig. 2, unit 33] for generating a focus error signal which corresponds to defocusing [which causes aberration] of said objective lens relative to any of said recorded layers of said optical disk, on the basis of a detection signal of said photodetection means [col. 5, line 37 to col. 6, line 8];

recorded-layer movement control means [fig. 2, unit 40] for generating a signal which controls said focus drive means, on the basis of the error signal, in order to move said objective lens on the recorded layer which is an objective of said objective lens [col. 5, line 37 to col. 6, line 8]; and.

focus pull-in means [fig. 1-2, units 6 & 7, part of unit 31] for pulling in the focus of said objective lens onto said recorded layer on which said objective lens is to be focused, said pull-in means being permitted to switch on and off by said recorded-layer movement control means [col. 5, line 45 to col. 6, line 8 and col. 9, lines 21-63].

NOTE: Ichimura discloses most of the description with respect movement of these lenses with respect to single surface. However, it is equally applicable to beam movement from layer to layer as disclosed by Ichimura [col. 10, line 61 to col. 11, line 4].

Ichimura discloses all of the above elements, including recorded-layer movement control means, focus pull-in means and generating focus error signal intermediate value which is between maximum and minimum values [col. 9, lines 21-63 and col. 10, lines 20-60]. Ichimura does not specifically discloses details of

intermediate value generation or that it is generated automatically from these MIN-MAX values to the extent claimed.

However, Nagata clearly discloses:

calculating [col. 14, lines 63-67] an intermediate value from a maximum value and a minimum value of said focus error signal and tracking error signal [ABSTRACT, col. 14, lines 20-67 and fig. 13]; and

in case of moving the focused position of said objective lens to said recorded layer, said focus pull-in means for performing an automatic adjustment [fig. 13, unit 270] of focus bias is turned on when said focus error signal has corresponded to the intermediate value [col. 14, lines 20-67 and fig. 13].

Both Ichimura and Nagata are interested in improving the focus adjustment of the objective lens. Both Ichimura and Nagata show automatic control of various systems and also focus and servo control and max-min values of focus error.

One of ordinary skill in the art at the time of invention would have realized that even though Nagata only shows MAX-MIN calculate circuit with respect to TE signal, the same concept of "MIN-MAX calculation" can be applied to focus control signal. Also Ichimura clearly discloses that he is calculating MIN-MAX values of focus control signals and also generating an intermediate value [col. 14, lines 20-67].

Therefore, it would have been obvious to have used the concept of MIN-MAX value calculation, for calculating intermediate value, in the system of Ichimura as taught by Nagata because one would be motivated to reduce the focus deviation due to any cause and increase S/N ration for higher reliability in the

system of Ichimura and provide better signal controls and improve quality of the signal to noise ratio [col. 2, lines 45-55; Nagata].

NOTE: Ichimura discloses most of the description with respect movement of these lenses with respect to single surface, it is equally applicable to beam movement from layer to layer [col. 10, line 61 to col. 11, line 4].

4. As to claim 2, Ichimura discloses:

focus drive means [fig. 1, unit 6 and 7] for moving the objective lens in a direction orthogonal to the recorded layers of the optical disk [col. 3, line 51 to col. 4, line 12];

photodetection means [fig. 3, unit 74 and 77] for detecting reflected light from said optical disk [col. 6, lines 9-38];

focus-error-signal generation means [fig. 2, unit 33] for generating a focus error signal which corresponds to defocusing [which causes aberration] of said objective lens relative to any of said recorded layers of said optical disk, on the basis of a detection signal of said photodetection means [col. 5, line 37 to col. 6, line 8];

recorded-layer movement control means [fig. 2, unit 40] for generating a signal which controls said focus drive means, on the basis of the error signal, in order to move said objective lens on the recorded layer which is an objective of said objective lens [col. 5, line 37 to col. 6, line 8]; and.

focus pull-in means [fig. 1-2, units 6 & 7, part of unit 31] for pulling in the focus of said objective lens onto said recorded layer on which said objective lens is

to be focused, said pull-in means being permitted to switch on and off by said recorded-layer movement control means [col. 5, line 45 to col. 6, line 8 and col. 9, lines 21-63].

NOTE: Ichimura discloses most of the description with respect movement of these lenses with respect to single surface. However, it is equally applicable to beam movement from layer to layer as disclosed by Ichimura [col. 10, line 61 to col. 11, line 4].

Ichimura discloses all of the above elements, including recorded-layer movement control means, focus pull-in means and generating focus error signal intermediate value which is between maximum and minimum values [col. 9, lines 21-63 and col. 10, lines 20-60]. Ichimura does not specifically discloses details of intermediate value generation or that it is generated automatically from these MIN-MAX values to the extent claimed.

However, Nagata clearly discloses:

calculating [col. 14, lines 63-67] an intermediate value from a maximum value and a minimum value of said focus error signal and tracking error signal [ABSTRACT, col. 14, lines 20-67 and fig. 13]; and

in case of moving the focused position of said objective lens to said recorded layer, said focus pull-in means for performing an automatic adjustment [fig. 13, unit 270] of focus bias is turned on when said focus error signal has corresponded to the intermediate value [col. 14, lines 20-67 and fig. 13].

Both Ichimura and Nagata are interested in improving the focus adjustment of the objective lens. Both Ichimura and Nagata show automatic control of various systems and also focus and servo control and max-min values of focus error.

One of ordinary skill in the art at the time of invention would have realized that even though Nagata only shows MAX-MIN calculate circuit with respect to TE signal, the same concept of "MIN-MAX calculation" can be applied to focus control signal. Also Ichimura clearly discloses that he is calculating MIN-MAX values of focus control signals and also generating an intermediate value [col. 14, lines 20-67].

Therefore, it would have been obvious to have used the concept of MIN-MAX value calculation, for calculating intermediate value, in the system of Ichimura as taught by Nagata because one would be motivated to reduce the focus deviation due to any cause and increase S/N ration for higher reliability in the system of Ichimura and provide better signal controls and improve quality of the signal to noise ratio [col. 2, lines 45-55; Nagata].

NOTE: Ichimura discloses most of the description with respect movement of these lenses with respect to single surface, it is equally applicable to beam movement from layer to layer [col. 10, line 61 to col. 11, line 4].

5. As to claim 4, Nagata discloses:

means for obtaining an intermediate value [fig. 13, units 72 & 273] from a maximum value and a minimum value of a focus error signal which corresponds to defocusing of the objective lens, and which is generated by a certain one of the recorded layers [col. 14, lines 20-67]; and

means for turning on a focus servo [fig. 2, unit 40, especially unit 93] which pulls in a focus of said objective lens, with a bias at which the focus error signal

corresponds to the intermediate value, in case of the layer jump to the recorded layer [col. 14, lines 20-67].

6. As to claim 5, it is drawn to a method corresponding to the apparatus of claim 4, is rejected for similar reasons set forth in the rejection of claim 4, supra

7. As to claim 6, it is claim corresponding to the apparatus of claims 2 and 4, and is rejected for similar reasons set forth in the rejection of claims 2 and 4, supra. As to the added limitation of a program product Nagata discloses that these calculation can be performed or implemented by program control stored in a CPU [col. 14, lines 63-67].

8. Applicant's arguments filed on 4-21-05 have been fully considered but they are not deemed to be persuasive for the following reasons.

In the REMARKS, the Applicant argues as follows:

A) That: "Nagata fails to teach Applicant's the limitation of independent claims 1, 2 and 4-6 requiring means for obtaining and intermediate value from a maximum value and a minimum value of a focus error signal which corresponds to a defocusing of the objective lens, with a bias at which the focus error signal corresponds to the intermediate value, when a layer jump is made to another recorded layer." [page 7, paragraph 3; REMARKS].

FIRST: The Applicant's are correct that Nagata by himself does not disclose all the limitations as now presented in amended claims. However the combination of

Ichimura and Nagata clearly discloses all these. Ichimura discloses a system for adjusting focus error signal, and also discloses max-min value generation. Nagata shows the details of max-min value generation. Even though detail circuits relate to Te signal these concepts are equally valid for the Fe signal as disclosed in the ABSTRACT of Nagata.

SECOND: "See also new rejection above.

B)That; "Thus, unlike Applicant's claimed invention, the focus offset of Nagata is not adjusted based on the an intermediate value from a maximum value and a minimum value of a focus error signal, and moreover is not even adjusted based on a focus error signal.". [page 7, paragraph 4; REMARKS].

See paragraph 8, section A) above.

NOTE: As to rest of the arguments please see NEW rejection above with explanation and notes.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam R. Patel whose telephone number is 571-272-7625. The examiner can normally be reached on Monday through Thursday from 7:30 to 6.

The appropriate fax number for the organization (Group 2650) where this application or proceeding is assigned is 703-872-9306.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Wayne Young can be reached on (571) 272-7582.

Any inquiry of a general nature or relating to the status of this application should be directed to the Electronic Business Center whose telephone number is 866-217-9197 or the USPTO contact Center telephone number is (800) PTO-9199.

GAUTAM R. PATEL
PRIMARY EXAMINER

Gautam R. Patel
Primary Examiner
Group Art Unit 2655

June 21, 2005